

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
19 May 2005 (19.05.2005)

PCT

(10) International Publication Number
WO 2005/044306 A3

(51) International Patent Classification⁷: **A61K 39/395, A61P 37/06, 29/00 // C07K 16/28**

(74) Agents: **ALEXANDER, Lisa, E. et al.**; Chiron Corporation, Intellectual Property Department, P.O. Box 8097, Emeryville, CA 94662-8097 (US).

(21) International Application Number:

PCT/US2004/036957

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date:

4 November 2004 (04.11.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

| | | |
|------------|-------------------------------|----|
| 60/517,337 | 4 November 2003 (04.11.2003) | US |
| 60/525,579 | 26 November 2003 (26.11.2003) | US |
| 60/565,710 | 27 April 2004 (27.04.2004) | US |

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): **CHIRON CORPORATION [US/US]**; 4560 Horton Street, Emeryville, CA 94608-2916 (US).

Published:

— with international search report

(88) Date of publication of the international search report:
15 September 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/044306 A3

(54) Title: USE OF ANTAGONIST ANTI-CD40 ANTIBODIES FOR TREATMENT OF AUTOIMMUNE AND INFLAMMATORY DISEASES AND ORGAN TRANSPLANT REJECTION

(57) Abstract: Methods of therapy for treating a subject for an autoimmune disease and/or inflammatory disease are provided. The methods comprise administering a therapeutically effective amount of an antagonist anti-CD40 antibody or antigen-binding fragment thereof to a patient in need thereof. The antagonist anti-CD40 antibody or antigen-binding fragment thereof is free of significant agonist activity, but exhibits antagonist activity when the antibody binds a CD40 antigen on a human CD40-expressing cell. Antagonist activity of the anti-CD40 antibody or antigen-binding fragment thereof beneficially inhibits CD40L-mediated stimulation of CD40-expressing cells, and thus inhibits survival and signaling pathways of human CD40-expressing cells that are mediated by CD40L.